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THE PSYCHONEUROSES AFFECTING THE GASTRO-INTESTINAL TRACT *

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The general approach to the subject of the neuroses and psychoneuroses of the gastro-intestinal tract is through the study of disordered mental processes in general as they fall in the field of the neurologist and psychopathologist, and not through that of the gastro-enterologist.

We must categorically deny that there exist neuroses of the stomach or enteric canal; we must affirm that such disorders merely choose the upper or lower alimentary tract for the symptomatic expression of a mental disturbance which differs only in kind but not in identity from psychoneuroses in general.

The older generation of specialist regarded hysterical vomiting as a disturbance of the stomach and not of the psyche; nervous diarrhea as the evidence of a disordered intestine and not essentially and totally a manifestation of a mental conflict.

* Delivered October 15, 1929.

Today, the brilliant advance made by the students of affective psychology in studying the processes of the human mind, both in its normal state and in its abnormal mechanisms, has taught us clearly the lesson that in pathological mental states one must seek the origin, the motivation and the manifestation of all the neuroses.

Whether the overt demonstration be in the cardiovascular region, in the alimentary tract, or the pulmonary or peripheral systems, the common origin of the disturbance is in the patient's psyche. As internists and specialists we must pool our interests and follow the guidance of the psychoneurologists, for theirs is the superior knowledge and theirs is the problem to the general approach of the subject.

Nevertheless practical considerations force each of us, as physicians and as specialists in various fields, to the analysis and the treatment of vast numbers of patients suffering from mental maladjustments with somatic manifestations. For the daily patient, recognizing only the end-result of the process, seeks us for relief of symptoms which to him are evidently gastric or intestinal in nature. He does not realize the nature or causation of his malady, but believes only that his stomach or his intestines are misbehaving. The recognition of the origin of his symptoms, their proper classification, and their differentiation from organic disease falls definitely in the rôle of the somatic specialist and the mass of the practitioners of medicine.

Neither the general practitioner nor I am fitted by special neurological training to handle the more complicated types of the neuroses as they frequently present themselves. To differentiate the types of hysterias and the neuroses as well as the more difficult psychoses, to classify the cases in terms of the more advanced psychopathologists as anxiety neuroses, compulsion and conversion hysterias, hypochondriasis and neurasthenias is beyond the scope of most of us.

Yet the very mass and numbers of cases that annually present themselves to us, force all of us to assume the

rôle of amateur psychoanalyst and students of disordered behaviour. We are forced by circumstances to diagnose, differentiate and even treat large numbers of these cases, handicapped as we are by lack of specialized psychologic knowledge. There is an urgent need that the body of the profession be capable of recognizing and roughly grouping the cases and to a large and practical degree be psychologically educated to handle at least the simpler problems dependent thereto.

Etiology

Every internist who practices gastro-enterology as a specialty soon recognizes that a large majority of the cases that present themselves are suffering from functional or neurotic disturbances. While all the specialties give ample evidence of being burdened with high percentages of neurotic patients, it would seem that particularly in the abdominal field the neuroses make up the bulk of the cases. There is no evident answer to the query of why this should be; there is only the fact that a preponderating percentage of persons suffering with mental conflicts evince predominatingly gastric or intestinal means for the outward manifestation of their woes.

This is hardly the place to enter into a detailed discussion of the causation and fundamental nature of the neuroses. The older schools of thought believe the neuroses to be founded upon heredity or upon a constitutional organic or somatic inferiority. By some a hereditary anlage, by others a constitutional predisposition or a neuropathic or psychopathic trend is invoked as a basal underlying factor. Modern thought tends to stress the environmental or developmental factors, to the neglect of the constitutional or hereditary elements. Personally, I lean heavily on the theory that heredity is the most important factor both in our physical and our mental and psychic make-up. A close observation of family groups makes it soon evident that certain behaviour and mental traits are constant factors in more than one member of a family; one frequently notes not only common physical qualities but also

common psychologic and mental characteristics identical in parents and some, if not most, of his or her children. Not infrequently one sees an almost identical type of anxiety neurosis in father and son or in mother and son or daughter, and the same neurotic predisposition may even be carried over to the third generation. Just as one notes, as Hurst has pointed out, a hypersthenic hyperacid type of stomach in many members of one family; just as one frequently sees in large families many members who complain of the same types of functional digestive disturbances; just as we not infrequently see chronic peptic ulcer invade many members of the same family—so we see an introspective neuropathic constitution in parents handed down as a dominant to various of their sons and daughters.

Heredity is a powerful factor—environment and association are also powerful but less so, being chosen and predetermined in a larger degree by the constitutional trend of character which deliberately chooses, by an inherent preference, to build up such an environment.

Another school bases the neuroses in physiological or functional disturbances of the various visceral systems of the body; metabolistic, endocrine, alimentary or nervous. This theory is still in the realm of speculation and metaphysics for it is still impossible to demonstrate the endogenous toxins or auto-intoxicants that might produce mental conflicts and lead to repressions.

Endocrine hormones may and probably do influence health and general states of well-being; but except for the sex hormones which have an undoubted effect on mental and psychic processes, a study of hormonic activity fails to convince one of their causative relations to the psychoneuroses.

The Behavioristic school of Watson would invoke the mechanism of disordered conditioned reflexes as the basis of neurotic disturbances. At first very promising, closer study fails to convince one that any elaboration of the

simple but brilliant laboratory experiments of Pawlow can be sufficiently developed into a system of psychopathic disease. To consider the psyche and mind of man as of inferior importance, to attribute human behavior to a complexity of conditioned and reconditioned reflexes and the neuroses as the result of disturbed and evil-conditioned reflexes is to magnify a kernel of truth into an exaggerated and distorted theory.

In by far the greatest number of instances Social Conflict and a dysharmony between the individual himself and his environment underlies the etiology of the neuroses. Today, as in every other time in the history of the evolution of man, there is a conflict between the individual and the conventional concepts of the group. The Social Biologic theory stresses the antagonism or lack of harmony between the ego of the man and the interests of the social group known as Society.

The instincts of self-preservation and of procreation represent the two fundamental prerequisites to and of biologic life. The threat to the former (self-preservation) constitutes the basis for the neuroses according to the Social Biologic School; according to the Freudian psychoanalysts, the causation of the neuroses lies essentially in disturbances of the sex-life.

The higher civilization of today, its greater complexity and the intensity of one's individualism lead to greater conflicts than ever between the individual's behaviour and the mass needs of the social group. The neurosis is the evidence of the instinctive desires of the individual in antagonistic relation to the purposeful moral activities of the complex social organization.

The weakening of the hold of religion, as we see it today, upon the mind and conduct of the person, has relaxed the moral conventions and has liberated the individual to a greater freedom and a more deliberate choice of personal conduct under difficult conditions. To the strongminded, this is an advantage, strengthening his self-

confidence and his will; to the weaker, robbed of the protection and the authoritative guidance of the church, this is at times almost a misfortune. Unable to turn for guidance to a supernatural deity he is forced to rely upon himself, and in his confusions and doubts his less capable mentality wavers and vacillates often engendering mental conflicts which may eventuate in a neurosis.

Simple domestic relations, even under the most favorable of conditions very often provide a nucleus of discord and dissonance upon which many of the neuroses are based. In fact, the more one sees of social and the more intimate domestic relationships, the more pessimistic one becomes of the likelihood of people living closely with other people without eventually a breach of harmonious relations. It is fashionable to make marriage the scapegoat in such discordances. True, married life with its personal intimacies and problems, its financial crises, the questions evolving and devolving over the upbringing and discipline of children constitutes, even without introducing the much overrated sex question, the most difficult and complex of human relations.

The selfishness and heedlessness of adult children are commonly, in my experience, the bases of gastric and intestinal neuroses. Conversely, the parents often originate problems of greater complexity particularly when the parents are advanced in years and the children are married and have their own problems. Irascible, demanding and autocratic abuse of parenthood creates as many problems as do the issues which arise over the training of younger and dependent children.

We are confronted daily with increasing numbers of retired middle-aged business men of ample means, who intimidated by economic conditions from re-entering the whirlpool of business stress, are forced to convert an active life into one of necessitated inactivity. Most of these men know how to work but not how to play; they are completely devoid of the spirit of relaxation and recreation. Such forced idleness is ruinous to the morale of

many of the more capable men of affairs and often gives rise to conflicts developing into well recognized neuroses, some of them with very well defined gastric and intestinal manifestations.

The same refers to the increasing numbers of small business men forced out of their employment by the rapidly changing economic conditions incident to the organization of chain groups and large financial coalitions and consolidations. This is a problem which will probably in the near future assume a more serious aspect.

Fatigue, mental and physical, often furnishes a groundwork for the development of exhaustion states and of gastric and intestinal neuroses. It is surprising to note how often many of the gastro-intestinal functional conditions and many of the somatic neuroses disappear with sufficient sleep, rest and play; problems which seem insurmountable, outlooks bordering on depression and pessimism, often disappear or yield to deliberation after sleep and rest. While this fact may be regarded as trite, pure fatigue of the body and mind from strain and insufficient hours of sleep may often be overlooked in connection with the etiology of the neuroses. Insomnia itself is a very potent factor for evil and may lead to exhaustion and its neurotic consequences.

Alcoholism, or in its milder aspects drinking for sociability sake, is hardly a factor in the origination of the neuroses and is in fact responsible for only a very exceptional functional gastric disturbance. In spite of the spread of the drinking habit since prohibition to nearly all classes of society, alcoholism is less a factor in mental disturbances and the causation of neurotic degenerative states than before. On the other hand tobacco is becoming a more serious problem, and the rapidly extending use or abuse of cheaper cigarettes by all classes of society is introducing new problems. It would seem that many highly excitable and nervous states are founded upon excessive cigarette consumption; heartburn, hyperacidity, nervous constipation, insomnia and very probably duo-

denal and gastric ulcer stand in a causal relationship to the current abuse of smoking. It would seem more logical, as experience increases, to attribute to the excessive use of tobacco certain types of obstinate and persistent heartburn occurring after meals and associated with epigastric pain and a spastic type of constipation. The symptoms may become so severe as to simulate gastric or duodenal ulcer. The effect of the withdrawal of the tobacco, particularly cigarettes, is striking and usually results in an abrupt disappearance of symptoms. There seems also to be some scientific basis for the conclusion that excessive smoking can lead to a recurrence of ulcer symptoms in susceptible persons.

The Psychoanalytic Theory of the Neuroses is a purely psychological explanation of their origination. This very important school of psychologists, founded about forty years ago by Breuer and by Freud, represents a most noteworthy advance in our consideration of this subject. Denounced by the more conservative because of its overemphasis on the importance which the sex life plays in mental hygiene, it yet represents a most lucid and thoughtful and serious attempt to analyze the difficult situations arising in neurotic and psychoneurotic behaviour. Apart from its great contribution in the rediscovery of the importance of sex and in the emphasis placed upon the sex motif as a motivating factor in many of the complex situations in life, psychoanalysis has emphasized the importance of unconscious mental activity; frequent conflicts between subconscious fixations and the will-to-do lead to conditions of mental turmoil, states of anxiety and eventually well established somatic neuroses, psychoneuroses and particularly the hysterias.

Failure to adjust to difficult situations constitutes the external conflict or the mental trauma. Repression leads to regression to infantile levels of sex-life and the origination of an inner conflict. Further repression of ungratified wishes and the suppression of the libido, may lead, by sublimation, to the formation of symptoms very often of

gastric or intestinal nature. Hysteria represents a further regression to an earlier narcissistic state with the possible origination of a compulsive neurosis or a conversion hysteria.

Psychoanalysis constitutes a real advance; whether one accepts it in totality or questions the extent to which it carries its suggestion, this school of thought deserves the most careful consideration and will be generally condemned only by those who cannot or will not take the trouble to comprehend it.

Finally one must consider the line of thought advanced by Adler of Vienna. He bases the origin of the neuroses in a visceral or somatic inferiority and the attempt of the patient to overcompensate the conscious physical and mental inferiority by the assumption of a "masculine protest." Here the idealization of the parent is made a basic thought and the subconscious effort to imitate or improve upon the parent ideal constitutes a basis for the neuroses. My experience with this system of psychological analysis is necessarily limited and not particularly convincing.

Symptomatology

Generally speaking the behaviour of the neurotic individual is quite characteristic. He is usually small, light in weight, emotional and temperamental and belongs most often in the asthenic group of Stiller, rather than in the apoplectic or hypersthenic constitutional category. The neurotic springs from the same grouping of ptotic individuals from which genius and persons of powerful achievements also frequently originate. His temperament and emotional reactions are usually superficially observable; he enters the consultation room with a page full of written reminders and queries lest he overlook some fact of vital importance to his health. He talks freely and egocentrically of his symptoms, repeats himself innumerable times, dwells insistingly on details and in his volubility omits the salient points of his history.

He is essentially anxious, oppressed with fears and doubts—in fact anxiety and indecision are his main evident characteristics. He is unable to make a decision or incapable of sticking to one. He is sensitive, apprehensive and though selfish, lacking in self-confidence. He is often closely attached to his family who in his anxiety seems to offer the nearest prop and yet finds most of his ailments to originate from family and personal differences and problems.

He is intensely preoccupied, overenthusiastic at times, easily depressed at other times, rarely consistent. He is sick today, much better tomorrow, and incurably ill next week.

Rather than recite the list of gastro-intestinal symptoms that characterize this class of neuroses and psychoneuroses let me illustrate by short reviews of case histories the outstanding clinical complaints. At the same time we may make the effort to attempt to classify such cases, accepting always the classifications of psychoneurologists as at present codified by the School of Psychoanalysts.

Case number 1 refers to a lawyer 36 years of age who in the last few weeks complained of dizziness, depression, constipation, itching in the anal region and excessive tiredness. He has an uncomfortable feeling in the abdomen, poor appetite and complains of fullness and distress after eating. He has had a long course of colon irrigations without relief of symptoms.

Upon analysis two points have important bearings. One, he underwent an operation for so-called "chronic appendicitis" two years ago. The clean-cut abdominal scar of an appendectomy for this phantom disease is a stigma which marks a very large percentage of neurotics with abdominal pain as an outstanding complaint. The numbers of young and nervous individuals who carry such scars of unnecessary operations are a token of inaccurate and careless medical diagnosis and of meddlesome surgery. The postoperative course in this unfortunate individual had been

further complicated by a pulmonary embolism and by a phlebitis of the left saphenous vein, causing a threat to life, a protracted convalescence and a loss of seven months of efficient working time; and the abdominal symptoms had not been relieved by the operation.

Dizziness is another of the prominent symptoms of this and like patients. Vertigo is a common manifestation of the neuroses. Actual labyrinthine disease ("Menière's Syndrome") with violent vertigo is comparatively very rare. Dizziness due to that vague concept "intestinal intoxication" is more frequently seen and is noted for its rapid subsidence under colon irrigation therapy. But dizziness as a symptom of the neuroses, pure and simple, is a common phenomenon amenable to rest and sedatives.

The third point in this case was the elicitation of the fact that a near member of the family had recently died of carcinoma of the rectum. The etiology of the neurosis was thus evident. Founded in a man of temperamental instability, subject to vague neurotic abdominal complaints, a carcinophobia was built up with the sublimation of the unconscious fear upon the intestine and rectum. This was an evident case of anxiety neurosis.

Case number 2 was the father of the former patient just discussed. This sixty years old man suffered from burning pains all over his abdomen, a bitter and nauseous taste in his mouth, frequent headaches, a feeling of lifelessness in the forenoon. He was easily depressed, suffered from insomnia and cried at slight provocation.

The analysis in this case shows a strange condition of familial and domestic discord. The old man is separated from his wife by the act of his children. The children, all now adults, dominate the picture; the father regarded and treated by his family as senescent is condemned to live alone. An anxiety neurosis, bordering upon a hypochondriasis was thus engendered.

Case number 3 relates to a seventy-years-old man whose sole complaint was "constipation." Peculiarly, this un-

fortunate was never constipated, regular daily movements being easily initiated by a roughage diet or mineral oil. But he presents the picture of one who complains continually of insufficient movements, of a feeling of rectal fullness and bloating. He denies the fact of defecations, prevaricates weakly, incessantly phones and makes a nuisance of himself! He spends his days and his means seeking medical aid from various classes of specialists for a phantom constipation. His is a self-evident case of hypochondriasis with an undoubted ano-erotic hysterical element.

Case number 4 is that of a middle-aged woman whose outstanding complaint for many years has been abdominal pain. The pain, unlike that of organic visceral disease is unrelated to any system of organs; it varies from week to week, now gastric, now intestinal, now renal in location. She has been thrice operated upon, once for chronic appendicitis, once for "gall-bladder" disease, and finally for retroverted uterus, all three evidences of misguided medical advice. An analysis of the social and personal factors in this case leads to no satisfactory end, as is unfortunately so common an experience with complicated emotional conflicts. There is a conjugal lack of companionability without a loss of sex love; there is a competitive jealousy of the husband's family and numerous other factors of lesser importance. The School of Adler would analyze this case and base the neurosis upon a visceral and mental inferiority-complex and an attempt at building up a "masculine protest." This was evidenced on the part of the patient by excessive imitation of masculine sports, futile attempts to acquire a productive career and other imitative masculine faculties. The psychoanalysts would see in this person an instance of sex repression with conflict and a loss of interest in the conjugal state. The case would seem to resemble an anxiety hysteria in a person of psychopathic traits, with a sublimation of the conflict in symptoms of abdominal pain.

Conversion hysteria is not so infrequently met with in general and special practice. The case (case number 5)

of a woman entering a stormy artificial menopause at the age of 44 years, suffering from morning vomiting, insomnia, excessive nervousness and depression and a dislike and intolerance to foods. In addition, the case was characterized by spells of nervous diarrhea, this symptom being intensified by all states of emotional upset and domestic strife. In this instance there are combined many of the recognized causes for the development of the neuroses. There is a conflict resulting from a loss of sex-interest, solicitude and consideration on the part of the husband; the feeling of a conscious inferiority due to the waning youth, lessened sex attractiveness, increasing corpulence and maturity; and there is also present the endocrine disturbances and hormonic imbalances that accompany menopause, intensified as it was by intensive ovarian radiotherapy.

The morning vomiting is again a sublimation of a neurosis based upon a social, domestic, sexual and endocrine disturbance.

Hysterical vomiting as a sole symptom of a neurosis is very common. It is seen frequently in young girls who have a fear of pregnancy; in men who are overworked and under extreme tension; in retired men of affairs who are in conflict with their newly found and forced leisure and in numerous other instances illustrating conversion hysterias. It is often associated with nervous loss of appetite "anorexia nervosa" and often constitutes, "like bulimia," excessive appetite, a symptom of well-organized psychoneurosis in the form of conversion or compulsion hysterias or actual psychopathic states. In a milder form, I observed compulsive vomiting in a minister, the head of an exceptionally intelligent congregation, who forced to preach on Sunday morning, was so obsessed with his own inferior education as a self-made and self-educated man, that his sermons were threatened and often interrupted by an overwhelming nausea terminating in vomiting. And so the examples might be multiplied many fold.

Though this paper is intended essentially as a review

of the neuroses as they evidence themselves in alimentary manifestations, a true analysis of the situation demands a discussion of functional gastric and intestinal disturbances, either in association with psychoneuroses or as manifestations of dysfunction of the autonomic nervous system. Deviations from the normal secretory or motor activity of the gastro-enteric tract constitute the functional disturbances. Among these may be mentioned abnormal states of secretory activity in the stomach, namely, hyperacidity or hypersecretion, or achlorhydria or achylia gastrica; motor disturbances such as hyperperistalsis or on the other hand true gastric atony. In the intestinal tract we recognize such functional abnormalities as mucous colitis and that large group which we familiarly speak of as constipation, spastic or atonic in variety. Abnormal emotional and psychic states stand in relation to such functional visceral disturbances as cause to effect. A hidden mental conflict may result in one instance in an anxiety neurosis; in another in a conversion hysterical loss of function; but when long maintained it may very well give rise to just such a functional disturbance as previously enumerated.

The effect of the emotions upon the functional activity of the alimentary tract is easily demonstrable; medical literature, beginning with the classic experiments of Beaumont upon Alexis St. Martin and continuing through the observations of Cannon, Carlson, Pawlow, Babkin, Alvarez and many others, as well as personal experience are redolent with such convincing examples. Beaumont noted definite motor and secretory inhibitions to follow the emotions of anger or disappointment; Pawlow created the concept of psychic gastric secretion as the initial stage of digestion in the stomach. Cannon suggested the existence of a psychic increase of gastric muscular tonus upon the sight and taste of food. It is well known that the fear of the passage of a stomach tube may inhibit gastric secretion in an intimidated patient. Anger very frequently causes the immediate sensation of heartburn, and fright may cause an increase of intestinal motility eventuating

in diarrhea or may cause a fixed spastic constipation. Lueders reported variable degrees of achlorhydria as regularly present in many of the psychoses particularly melancholia. Bennett and Venables in the case of a hysterical girl in a state of hypnosis were able to vary the gastric secretion by suggesting either agreeable comestibles or reviving pleasant associations or by suggesting hypnotic thoughts of fear or anger. Achylia gastrica simplex is a condition of complete absence of gastric secretion both for acid and for ferments and is, as we now understand it, usually a congenital and permanent condition which occurs in some few persons of high temperamental and emotional constitution. Achylia gastrica often is associated with or results in a so-called gastrogenous diarrhea. We may observe with interest that the achylia which accompanies pernicious anemia rarely gives rise to diarrhea but nearly always to constipation. The very frequent and constant intestinal overactivity which accompanies achylia gastrica simplex is probably just a continuation of and another manifestation of the original emotional and psychic state rather than an effect of the gastric anacidity as such.

The means by which such psychic traumata give rise to functional disturbances is by way of the autonomic or vegetative nervous system. The alimentary tract is entirely under the control of the two subdivisions of that system, namely the parasympathetic in antagonistic relation to the sympathetic nervous system. The vagus and sacral nerves constitute the part by which psychic and emotional states are transmitted in a stimulatory way to the alimentary tract, causing increased gastric secretory abnormalities, sphincter spasms and increased intestinal hypermotility. The sympathetic system carrying the analagous inhibitory fibres, when overexcited by psychic affective states or through the medium of endocrine stimulation (particularly the adrenal medulla), gives rise to hyposecretion, motor atony and states of muscular stasis. At times it would seem that the autonomic nervous system itself is independently capable of originating functional

disturbances. Cardiospasm is such an instance, and Hirschsprung's disease of the colon is another. Both conditions result from an imbalance or achalasia of stimulatory and inhibitory stimuli to the nodal stations controlling respectively the sphincter of the cardia and the rectosigmoid segment, and are not in my opinion associated with psychic abnormal states. But these seem to constitute exceptions rather than the rule. Most of the conditions latterly attributed to idiopathic disturbances of the autonomic nervous system, as if that system itself were capable of initiating disease, had far more logically be attributed to foci of psychogenic and emotional conflict and will thus fall within the group of the visceral or somatic neuroses. By that same token, that intractable and therapeutically baffling condition which we misname "mucous colitis," a neurogenic disturbance characterized by alternating states of persistent diarrhea with the discharge of abundant amounts of intestinal mucus, and obstinate constipation, is not in any sense of the word a colitis, but is essentially a neurogenic or better a psychogenic constitutional condition with predominating intestinal manifestations and dysfunction.

Differential Diagnosis

We thus note that the preponderating gastro-intestinal symptoms of the neuroses are pain of an unclassified variety, disturbances of motor function such as vomiting, diarrhea or constipation; disturbances of appetite such as anorexia, abnormally great hunger, or the appetite for unusual foods or substances. Functional alimentary disturbances often accompany the neuroses, these including gastric hypersecretion and hyperacidity or on the other hand achylia gastrica, air-swallowing (aerophagia), belching, nervous diarrhea, etc.

These symptoms being likewise common manifestations of many organic diseases, how shall they be classified and differentiated, the neurotic and psychic from the truly pathological? For this must represent our first and most

important critical differentiation. It is well to consider every case that presents itself as being possibly of organic origin, no matter how evident and superficially convincing the neurotic element may be. For the neurosis often hides or is accompanied by a focus of inflammatory or neoplastic disease. We must bear in mind three possibilities: one, the existence of a pure neurosis with functional disturbances; two, the case may be of truly pathological origin arising in a diseased viscus; three, an evident psychoneurosis may mask a visceral disease, both organic and functional conditions existing. The clinician must approach the analysis of his case with an absolutely open mind, heedful of all possibilities. A preconceived conclusion, a rapid guess, incompleteness of examination, or a prejudice against unfortunate neurotics is fraught with danger to the patient as well as to the reputation of the physician for conscientiousness and carefulness as a diagnostician. More crimes are committed in medicine from carelessness than from ignorance and inexperience and even in experienced hands "snap diagnoses" and reliance upon clinical impressions are fraught with danger.

A careful history is all-important; a painstaking physical examination is a pre-requisite even though it be essentially negative; and a careful roentgenographic study is today absolutely essential. It is hazardous to forego x-ray examinations, for one is frequently surprised to discover a peptic ulcer, a diseased gall bladder or a new growth where least intimated by the symptomatology. This refers particularly to persons who are insensitive to pain, for such people, being deprived of this important defensive mechanism, may easily gloss over mild or faint subjective apperceptions and fail thus to give proper account of important symptoms. The neuroses with predominant abdominal complaints must be differentiated carefully from gastro-duodenal ulcer, from gall bladder disease or recurrent appendicitis, and above all from carcinoma of the alimentary tract. Today, probably more than ever, the onset of coronary artery disease (angina pectoris) with initial abdominal symptoms, in any patient

past twenty-eight years of age, must be fully guarded against and recognized.

Regarding the symptom of pain, the fact is generally overlooked that not every person reacts to the same painful stimulus to a like degree or in a like manner. Given a harmful irritant of constant intensity, the reactions of various individuals may be classified on a scale running the gamut from marked hypersensitiveness to the other extreme of almost complete insensibility. In a general way certain physical and psychic factors operate to modify the reception of pain. Among the physical factors are age (younger persons being more, older persons less sensitive to pain); sex (females more sensitive than males); previous condition of bodily fatigue, the summation of former repeated hurts, and other recognized physical factors. Among the psychic factors are highly irritable mentality or emotionalism, vagotonic predisposition, a true psychoneurotic constitution, or conversely, a phlegmatic, indolent or equable personality. These together characterize a constitutional ensemble which is probably congenital in all of us, and one which modifies in a great way the degree and manner to which one reacts to a painful stimulus.

Pain may be defined as the mental interpretation of some abnormal or generally harmful process originating in the organism. Such stimuli may be either physical or psychic in origin. Hurtful irritants arising in the viscera are carried in the afferent sympathetic fibres into and through the posterior spinal ganglia; whence decussating and traveling by way of the lateral spinal columns they reach the optic thalami, that large central group of cells which receives, as a center, all peripheral reflective stimuli. The physical, or equally the neurogenic hurt is from the optic thalami "stepped up" into the cerebral areas of the postgyral sulcus whence it enters consciousness as mental or psychic pain.

The variability of the receptivity of pain depends therefore on two factors: (1) the state of tenseness and re-

activity of the lower brain and hypothalamic centers; and (2) the mental and psychic constitution which congenitally characterizes each individual and interprets or translates the stimulus into the consciousness of a pain.

What is a severe abdominal painful cramp to a hypersensitive person may be described by a normally sensitive patient as a mild or dull sensation; and by a person comparatively insensitive may be completely overlooked or result only in a complaint of scant uneasiness or distress. Thus a clinical history which constitutes a recital of diverse and continuous severe bouts of pain may be variably interpreted. If the person is found to belong in the class of those physically hypersensitive, and is in addition psychoneurotic or emotional it may be presumed that both the physical pain and the mental expression of that pain are exaggerated over the normal standard of sensitivity; in such a case the symptoms should be markedly discounted. But, on the other hand, the same symptoms in an insensitive phlegmatic person call for the full acceptance of every expression of pain, even to an even greater appreciation of the significance of the phenomena.

The greatest caution must be exercised in avoiding the mistake of thinking that the degree of psychic sensitivity parallels the physical sensibleness to pain. We have repeatedly found that an emotional or psychoneurotic person may be quite insensitive to physical pain as judged by the styloid pressure sign; and conversely many a phlegmatic, equable personality is unexpectedly found to be normally or even exaggeratedly pain-sensible. It is not sufficient to say that a patient is neurotic and therefore hypersensitive and to judge his symptoms as of purely functional or psychic origin. One must in addition test for physical pain, for therein lies a greater significance in the interpretation of the clinical complaints of pain than exists in the facies, manner and psychic constitution of the individual. If the knee jerks, Achilles tendon reflex and clonus are used as rough guides to the nervous irritability of a patient it will often be found that persons with

markedly exaggerated reflexes and pseudoclonus are yet insensitive to pain, and vice versa. In evaluating the painful phenomena engendered by the abdominal viscera it is the physical sensitiveness to pain as judged by an algesimetric method and not the mental expression of the pain, that is the important differentiating guide.

In gastric neuroses, or more properly speaking, the psychoneuroses with abdominal manifestations, one must be particularly careful to evaluate the complaint of pain from both the physical and psychic standpoint. Physicians since Hippocrates have recognized the facility with which neurotic individuals both create imaginary pains and exaggerate mild sensitive phenomena into gross complaints. But particularly here enters the importance of differentiating psychic from physical pain, functional from organic conditions. Great caution is required in the acceptance of the complaint on its face value of a person who is both physically emotional and also pain-hypersensitive. This emotional make-up may well cause him to express subjective functional phenomena in terms that masquerade exactly as those of organic origin. If the same type of individual is, however, found to be insensitive to physical pain, it behooves one to place full credence in his description of his subjective symptoms and to look carefully for a focus of organic disease as the point of origin of the complaints. I can well recall a man who because of his self-evident neurotic labile temperament had been passed over for twenty years as a neurotic whose pains were psychic and functional in origin. However, on testing him, it was found that he was markedly subsensitive to physical pain; a revised viewpoint was therefore taken of his clinical history, and careful studies now revealed a duodenal ulcer, confirmed at operation.

Prognosis and Treatment

In general the outlook for the neurotic is poor; occasionally the physician can by his authority dispel fear and reawaken self-confidence and so by suggestion bring a case

to a happy outcome. But as a generalization, the vast number of neurotic patients who, ceaselessly and obstinately hopeful, make the endless round of physicians with reputations, attest the failure of our profession successfully to cope with their problems.

Our difficulties are many, some of the failures being due to us, physicians, as a class, some attributable to the Gordian knots we are asked to untie. Most of our difficulties are due to the lack of time we are able to devote to the individual case and to the lack of specialized psychological and neurological knowledge at the disposal of the practitioner of general medicine. To do justice to a complicated neurosis, to analyze the individual situation, unearth the unconscious conflicts and by cartharsis bring them to the surface, is a laborious and delicate task requiring very much more time than the internist can ordinarily devote and the patient is willing to underwrite. Most often we are little less successful than the patient in unraveling the social snarl in which he finds himself enmeshed. Social biological problems are never simple; they involve not only the patient but the numerous adjacent individuals of the family unit, and business and economic conditions both personal and sociological. We can often control the patient, build up his mental reserves and strengthen his ego, but can we ever or even sometimes change the problem as it affects the other actors in the drama? Who is the Solomon who will judge the right from the wrong in personal and domestic strifes, particularly when only the plaintiff is being heard and then only with a self-prejudiced leaning? But even presuming upon a decision and a line of advice and conduct for a patient, can the physician engender love where there is none, attention and solicitude from a wandering mate, eliminate jealousy by an authoritative flourish or bring prosperity and restored business acumen by an ex-cathedra command? The patient himself is often unconsciously unwilling or unable to change himself thus offering one of the greatest difficulties in the whole situation.

In the simple cases, particularly the anxiety neuroses, the sympathetic understanding physician is of the greatest help in restoring the patient's confidence in himself, and in reassuring the anxious one that organic disease is absent. In the complicated cases the assistance of trained neuro-psychologists is necessary. With a very limited experience it does not seem that the school of Adler can do more than point out a supposed inferiority complex and its resultant masculine protest; it is questionable that such an analysis, no matter how interesting, will lead to cure. Watson's theory of behaviour and disturbed or malicious conditioned reflexes is still little more than a laboratory hypothesis and is far from a perfected system of psychological therapy.

For the more complicated cases, particularly the hysterias, the psychoanalytic method of Freud and his followers offers the most rational and most promising school of therapy. This method too has its obvious drawbacks. It is very time-consuming, in complicated cases requiring six months to two years for a successful analysis; it is therefore expensive, usually beyond the means of all but the most fortunate. It is impracticable in hospital and ward work, both because of the lack of privacy and facilities and of time on the part of the neurologist to handle the vast mass of the material. It lays undue stress on the sexual element in personal life, rarely failing to find some sexual dysharmony in every patient's problem and often unable to look beyond such a limited viewpoint to the adjacent broader biological and sociological problems. But in due justice to psychoanalysis we must say that they have offered us the most logical and most scientific approach to the solution of the question of dealing with psychoneurotic persons.

As a practical problem, however, because of the mass of the material and the limited number of accessible specially trained neurologists, it becomes necessary for each and every one of us to become his own analyst.

Success in the handling of emotional and neurotic individuals is based upon certain characteristics, some of them natural gifts and some of them acquired by effort and experience.

(1) A natural psychoanalytical insight.

(2) A sympathetic bearing arousing confidence.

(3) A broad experience with world affairs.

(4) Dignity and the manner of authority.

(5) A broad general education founded upon a breadth of view and a catholicity of interest in men and affairs.

A suggestion arising from such a one is likely to carry weight and help bring order out of a mass of disorder and conflicts. Suggestion in the form of a reassurance, a sentence of advice, or an authoritative request to rearrange methods of living will do what less obvious means cannot accomplish. Change of scene, hydrotherapy, sunlight and drugs all have their usefulness, but the real therapeutic agent is suggestion and advice.

The failure of the profession properly to educate itself in this problem and successfully to cope with it has led to the rise of cults and quackery throughout our civilized world. Old as time and medical history, the holy medicine man and the quack impostor of the cultists of today, have taken advantage of the situation and have exploited themselves and their faiths as magical, spiritual or religious healers. Whether by one method or another they practice by means of suggestion and suggestion only; whether by teeth of serpents, magic fire, Perkins tractors or Mary Baker Eddy's Monitor their methods are all based upon suggestion. Were that all, there would be less criticism—but it is their inability to make a scientific differential diagnosis of diseased conditions that makes a danger to the body social. They are successful only in proportion as they are led by men or women of unusual ability in understanding human nature and human equations.

The reflection is upon the profession of medicine. The trained physician should be the healer, not the inexperienced but loquacious seller of patented ideas. We have need not so much for more neurologists, though that would be a benefaction, but for an improved effort on the part of the profession in this direction. The doctor of tomorrow must have a broader and more general fundamental education, he should be widely traveled; the choice of the best human minds and material should go into the making of a physician. He should develop his interest in the Arts, in Literature and in the Drama, both in life and on the stage.

Literature particularly offers the widest acquaintance with mankind; for, with the rapid development of psychological fiction and drama, a better opportunity than ever is offered for the acquisition of knowledge concerning human behaviour, social conduct and the problems of the individual and of life. No man can live all of life in its various ramifications in the span of seventy years; Havelock Ellis did not live the sex life he wrote about. Read Flaubert, Balzac's Comedie Humaine, Stendahl, Ibsen, Thomas Hardy, Wassermann, Knut Hansen and above all Dostoyevsky and the master of all psychological fiction, Marcel Proust, and learn life, psychology and the ways of social conflict. Thus will we be in an improved position to handle with sane judgment and human understanding that largest number of invalided persons who constitute the class of "nervous patients."